

Notice of Allowability

Application No.

10/511,964

Examiner

Megann E. Vaughn

Applicant(s)

TAKIZAWA ET AL.

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE filed 11/30/2006.
2. ☒ The allowed claim(s) is/are 1-10 and 13-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-10 and 13-19 are allowed.

Reasons for Allowance

2. Claims 1-10, 13, and 14 are allowable over the prior art of record because the prior art of record does not teach or disclose a magnetic resonance imaging apparatus wherein the artifact removing means calculates the sensitivity image data of the receiving coils of the at least one unacquired slice position with a slice interpolation using the sensitivity image data of the first and second slice positions, and generates the sensitivity distribution data of the plural receiving coils on the slice positions of the examination image data on the basis of the plural sensitivity image data, in combination with the remaining limitations of the claims.
3. Claim 15 is allowable over the prior art of record because the prior art of record does not teach or disclose a magnetic resonance imaging apparatus wherein the sensitivity image data of the receiving coils of the at least one unacquired slice position is calculated with a slice interpolation using the sensitivity image data of the first and the second slice positions, and the sensitivity distribution of the plural receiving coils on the slice positions of the examination image data is determined on the basis of the plural sensitivity image data, in combination with the remaining limitations of the claims.

Art Unit: 2859

4. Claim 16 is allowable over the prior art of record because the prior art of record does not teach or disclose a magnetic resonance apparatus wherein the sensitivity image data of the receiving coils of the at least one unacquired slice position is calculated with a slice interpolation using the sensitivity image data of the first and the second slice positions, and the sensitivity distribution data of the plural receiving coils on the slice positions of the examination image data is generated on the basis of the plural sensitivity image data, in combination with the remaining limitations of the claims.

5. Claims 17-19 are allowable over the prior art of record because the prior art of record does not teach or disclose A magnetic resonance imaging method comprising acquiring sensitivity image data by executing a second pulse sequence using the plural receiving coils from first and second slice positions which have at least one unacquired slice position therebetween, of the plural slice positions on the object, the sensitivity image data of the receiving coils of the at least one unacquired slice position being calculated with a slice interpolation using the sensitivity image data of the first and second slice positions, in combination with the remaining limitations of the claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mertelmeier et al (US 6710686, Takahashi et al (US 6777934), Kellman et al (US 6556009), and Jakob et al (US 6289232).


Art Unit: 2859

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megann E. Vaughn whose telephone number is 571-272-8927. The examiner can normally be reached on 8 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEV
Patent Examiner Art Unit 2859
1/23/2007



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800